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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,546	12/18/2001	Moshe Ben-Chorin	P-4698-US	8134

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EXAMINER
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BAKER, CHARLOTTE M

ART UNIT	PAPER NUMBER
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2625

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/017,546	BEN-CHORIN ET AL.	
	Examiner	Art Unit	
	Charlotte M. Baker	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) 1-46 and 59-74 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 47-49 and 52-58 is/are rejected.
- 7) ☒ Claim(s) 50- 51 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____                                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____   | 6) <input type="checkbox"/> Other: ____                           |

***Response to Arguments***

1. Applicant's arguments with respect to claims 47-58 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Objections***

2. Claim 48 is objected to because "said proportion" lacks proper antecedent basis in light of the newly amended claim 47 which cancelled "a proportion" from the claim language.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 47-49 and 52-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lind et al (5,999,153) in view of Conner et al (Re 36,654) and Lin et al (6,757,428) and further in view of Holub et al (6,459,425).

**Regarding claim 47:** Lind teaches a device (Fig. 1) for soft proofing (col. 2, ln. 25-35) image data for printed material, the device comprising: (a) a light source (col. 4, ln. 65-67) for producing light having at least four primary colors (see table, col. 6, Conner); (b) a converter (scanner, col. 3, ln. 40-42 that develop image data into a plurality of spectral components RGB, also see col. 1, ln. 60-67, Lin 428) for converting the image data to a plurality of spectral components corresponding to the image data according to at least one characteristic of the print material (col. 4, ln. 15-30), said spectral components for use in producing converted data (the spectral components are used to produce display data, col. 3, ln. 47-60) corresponding to at least

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one of at least primary colors (col. 4, ln. 25-30); (c) a controller (the control of the display that selects a filter, col. 4, ln. 14-20, col. 14, ln. 25-30, 22, 23, fig. 3, fig. 4) for determining; at least one of said at least four colors according to said converted data for production by said light source (col. 4, ln. 32-35); and (d) a viewing screen (the display area that is illuminated by the light, col. 4, ln. 65-67, also see col. 16, ln. 67, Conner, it is well known in the art that a LCD display has a viewing screen) for displaying the image data according; from said controller.

Lind also discloses at col. 4, ln. 47-50 that the present invention is not restricted to specific colors, and any combination and number of colors and layers can be utilized to generate color filters **both of the additive color and subtractive color variety.**

Lind does not specifically address how many primaries that his system using white light as a light source is capable of producing.

Conner, in the same area of LCD display, teaches white light used in a LCD system, inherently can produce at least four primaries (R, G, B, C, M, Y) (see table 1, col. 6, also see col. 7, ln. 30-40 that a black filter is added to increase contrast).

Lind does not specifically address additive linear combination.

Holub et al disclose additive linear combination (col. 17, ln. 60 through col. 18, ln. 19).

Therefore, it would have been obvious to a person with ordinary skill in the art to produce light of all color possible including at least four primaries (the more the better) and determining an additive linear combination in the system of Lind such that the printed material is accurately displayed with enhanced contrast.

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**Regarding claim 48:** Connor teaches it is well known in the art that LCD display comprising: (e) a projector for projecting light of said at least four primary colors onto said viewing screen according to said proportion (col. 16, ln. 60-67).

**Regarding claim 49:** Lind and Connor teach wherein said light source comprises: (i) a polychromatic source (white light, col. 4, ln. 65-67, Lind); and (ii) at least four color filters (col. 3, ln. 67, Lind, table 1, col. 6, Connor), each color filter corresponding to an ink transmission spectra (col. 4, ln. 15-20, Lind).

**Regarding claim 52:** Lind teaches wherein said at least one characteristic of the printed material is determined according to a transmission spectrum of a combination of inks (col. 4, ln. 15-20).

**Regarding claim 53:** Lind teaches wherein said light source for producing light having at least four primary colors is selected such that a spectrum of said light having at least four primary colors is matched to said at least a portion of a spectrum of a combination of inks (col. 4, ln. 15-20).

**Regarding claim 54:** Lind teaches, wherein said at least one characteristic of the printed material is determined according to a color reflection characteristic of a material for receiving said combination of inks (col. 4, ln. 40-46, match ink on paper, inherently, the illumination condition of the paper determines the spectral of ink on paper).

**Regarding claim 55:** Lind teaches wherein said at least one characteristic of the printed material is determined according to a spectrum of a combination of inks (col. 4, ln. 15-20), and

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wherein a brightness of said light (col. 4, ln. 30-45, change the brightness of light would increase the color gamut available to the system to match the spectral of ink on paper; inherently, the illumination condition of the paper determines the spectral of ink on paper) having at least four primary colors is adjusted according to illumination conditions for said material for receiving said combination of inks.

**Regarding claim 56:** Lind teaches the device of claim 47, further comprising a white light source (col. 4, ln. 65-67) for producing white light, wherein said illumination conditions are adjusted according to an amount of said white light being produced (col. 4, ln. 35-40).

**Regarding claim 57:** Lind teaches the device of claim 47, further comprising: (e) a polychromatic light source (col. 4, ln. 65-67); and (i) a plurality of filters (col. 3, ln. 65-67) for filtering light from said polychromatic light source for producing said light having at least four primary colors (col. 4, ln. 25-30, col. 6, of Connor); wherein said at least one characteristic of the printed material is also determined according to a spectrum of at least one ink (col. 4, ln. 15-18), and said filtered light is adjusted (col. 4, ln. 35) according to a density of said at least one ink compared to said filters (col. 4, ln. 15-18).

**Regarding claim 58:** Lind teaches wherein a saturation of said light having at least four primary colors is adjusted (column 4, lines 30-45, change the brightness of light would increase the color gamut available to the system to match the spectral of ink on paper; inherently, the illumination condition of the paper determines the spectral of ink on paper) according to a gloss of said material, said material for receiving at least one ink.

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***Allowable Subject Matter***

5. Claims 50-51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

6. Citation of pertinent prior art: Holub (6,157,735); Myers (4,751,535); Marsden et al. (6,225,974); McLaughlin et al. (5,570,108).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charlotte M. Baker whose telephone number is 571-272-7459. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



KIMBERLY WILLIAMS  
PRIMARY PATENT EXAMINER